signed by Mr. L. Gruner, in the Cinque Cento style, and executed by Mr. T. Woodruff, at Bakewell, in Derbyshire stones, in imitation of the Florentine Mosaic. The stones, varied in hue, are inlaid on a black ground, in shaded figures of birds, flower forms, vases, serpents, scrolls, circles, and discs. Crossing the floor of the court, we note some sombre engravings on black marble, by Mrs. Rayner, of Berners-street, and near them a specimen of the mode of transferring prints to steel plates, by Mr. S. Russell, of Gravesend, and a little further on some illustrations of the application of white marble, as a material on which to paint miniatures, exhibited by Mr. T. Carrick, of Montague-street, the inventor.

Amongst the models of buildings is one, in the pith of the common rush used for rush-lights, of the west front of Exeter Cathedral, made by a lady—Mrs. Kingdon; and there are others,—of the Royal Arch, Dundee, an odd vagary; Tynemouth Castle and Tintern Abbey (coloured in *natural* tints), by Captain E. Morgan, Royal Artillery; Farm, by Mr. H. S. Merrett, of Fetter-lane, architect; Tudor Villa—an English home of 19th century, designed by a lady, and with many lady-like touches about it, but made by Mr. E. Sayers, of Wandsworth, builder; a Temple, by Mr. H. Fulton, designed to show a new order of architecture, with some mysterious instructions for turning it inside out attached to it, which were apparently intended for those who unpacked it, and not for the public; York Minster, by Mr. John Middleton, of Darlington, architect; St. Paul's Cathedral, by Mr. H. Scollick, of Birmingham, cut with a penknife out of card-board, and composed of 50,000 pieces; another of St. Paul's, on a larger scale, and also in card-board, by Mr. T. Wilby, St. Bartholomew's hospital; proposed County Courts at Newcastle-on-Tyne, by Mr. R. Grainger; chapel on plan of the choir of St. Mary Temple, by Mr. Wm. Bardwell, of Westminster, architect; another of York Minster, cut with penknife out of card-board, by Mr. James Dickenson, Limehouse; Royal Exchange, London, and The Monument, in cork, by a cork cutter in Eastcheap, Mr. T. Smith, jun.

In the nave, opposite the Fine Art Court, are also models,—of St. Nicholas's Church, Hamburg, as now being built, by Mr. G. G. Scott, architect—a large one exhibited by Mr. Stephen Salter, of Hammersmith, as modeller; Church of St. Nicholas and St. Mary, recently erected at Wilton,—architects, Messrs. Wyatt and Brandon—same modeller; County Assize Courts, recently erected at Cambridge—same architects and modeller.

A little farther west is a very large model of St. Stephen's Church, at Leverbridge, near Bolton, built entirely of Ladyshore terra cotta, of which material are also composed the principal portion of the interior fittings, as the pulpit, organ-screen, benches, &c. Mr. E. Sharpe, architect. The model is of the same material.

Other models in this part of the nave are, one of the Sacred Harmonic Society's orchestra, of 700 performers, at Exeter Hall, and one of Dinting Vale Viaduct, on the Sheffield and Manchester Railway, Mr. A. S. Jee, engineer. The brass lectern for the choir of Hereford Cathedral, designed by Mr. Cottingham, and manufactured by Mr. Thomas Potter, South Molton-street, is also here, together with the brass tablets by Messrs. Waller, which we overlooked when speaking of some other brasses close by.

While rambling through courts and galleries, before quitting the building, after some hours' hard work, we could not help drawing out our note-book again, to add a notice of the splendid electro-deposit for the House of Lords of the warlike figure of Geoffry Earl of Gloucester, by Westmacott. The mould whence this extraordinary electrotype was taken was a negative, made, it is said, of a composition of gutta percha, gelatine, &c., into which, of course, was poured the copper solution whence the deposit was made. Foreign artists, it seems, unanimously admit this figure to be a triumph of art: the statue can now be made and sold in any number at 200 guineas each. Mr. Henry Elkington was the electrotypist. There is also in the same division (west end of south gallery of west nave) a similar electrotype of the death of Tewdric, King of Gwent, modelled by Mr. Evan Thomas.

A little farther along this gallery, by the way, (at Garrard's) may be seen Mr. Brassey's testimonial—a large silver-gilt salver, with miniature portraits of eminent engineers, &c.

The following communications relate to the same all-engrossing subject, the Great Exhibition.

Examples of Cement outside.—In connection with the Great Exhibition, I would beg to call your attention to a few things, the first of which purports to be a trial of the strength of Portland cement by means of a beam erected in hollow brick and cement. If this were all the constructors would certainly be entitled to due credit, as far as the breaking weight is concerned, when the requisite trial comes to be made; but if we look a little farther, we shall soon see that no less than four courses of the brickwork of the said beam are interwoven in every course, and under every brick, with strong hoop-iron, making the whole experiment a mere farce. I really must protest against this on the part of others, who have given this cement a fair and *bond fide* trial. I really think the Royal Commissioners should have the whole deception at once removed. Their next-door neighbours, who exhibit an enormous flag of the Portland cement, expressly paint on the back, "no iron used." I would next call your attention to a statue of Richard I. or Cœur de Lion, erected at the west end of the building, out on the sward, which is such an exceedingly ornamental and artistic work, that I think the Royal Commissioners would erect a monument to their present triumph by the purchase and retention of it: however, if they should object, and Lord Seymour would allow of its remaining, I propose that it be purchased by public subscription. I should be most happy to forward a sovereign as my mite towards the desired object. One more suggestion in conclusion: a granite column has been contributed from the quarries of the Duke of Cornwall, which, after the Exhibition, will be useless. Now, I would propose the erection of this on Constitution Hill, as near the spot as possible where the lamented Sir Robert Peel met with the sad fall which ended in his death. The column is pretty, appropriate, and ornamental, and I think no monument could be better placed than where the lamentable accident occurred. The sentiment embodied in the idea of the eldest son of Her Majesty erecting a monument to her Prime Minister, to me seems truly English.—H. B.

Waterproof Bricks and Tiles.—The many evils arising from damp houses, induced me some twenty years since to turn my attention to that important subject. The hollow brick presented itself to my notice, but I found (under ordinary arrangements) it was a conductor of damp, and, therefore, abandoned the idea (other parties have since introduced the hollow brick to the notice of the public); after various experiments my efforts were crowned with success, the result being a patent for waterproof bricks and tiles, so that our dwellings can be made dry and warm, clean and healthy. I have exhibited specimens of this invention in the Exhibition of all Nations, sec. 3, class 27.

After a very careful investigation, I find—

One Malmo brick absorbs	62	ounces of water.
,, white Sussex	,,	58	,,
,, second	,,	52	,,
,, red facing	,,	51	,,
,, picking	,,	50	,,
,, stock	,,	27	,,

Bricks, after being waterproofed, will not absorb TEN GRAINS. The properties are not affected by the atmosphere, and therefore it should supersede all means used for resisting damp, such as stucco, cements, hollow bricks, &c. The expense of waterproofing bricks is so small, they can be used for building dwelling-houses, baths, tanks, reservoirs, railway tunnels, and every description of work where it is necessary to keep out water and resist damp.

J. T. S.

EXPRESSION IN ARCHITECTURE.

As the most accurate knowledge of the alphabet and grammar of a language is not literature, but a step in literature, from which the scholar proceeds to prose or verse composition or to rhetoric, so in architecture a knowledge of orders and styles is but a step to the study of those principles and laws of design, by the exercise of which the student is enabled to express his ideas in stone or brick with a greater or less distinctness; and as in the former we must do no violence to the essential spirit of the language, but duly respect its idiomatic peculiarities of structure; so in the latter we should use the elements with a just appreciation of the genius of the style which we have adopted.

This subject is not the less momentous that many celebrated writers on architecture have said but little, or been altogether silent upon it. Some architectural writers, it is to be feared, knew little of the philosophy of the art, however gifted in other respects. Many who from mathematical skill were eminent in the structural department, had not the poetic soul; and it is necessary that we make the distinction, if we would profit fully by their works. Wren's geometrical and constructive talents, it is probable, greatly preponderated over his artistic feeling. To make a truly great architect requires, I suspect, a very rare concurrence of qualities—one which the world has seldom seen. Plato, when he declared that a great architect was a rarity in Greece, needed probably no extravagant notion of what constitutes one, to lead him to the conclusion.

That the subject of expression has been so slightly recognised by modern architects is surprising, when we consider how manifold and diversified are the uses of our edifices. The definite expression of the divers ideas of their destination is a quality parallel with the development of the story in a history or scripture piece, or of the subject or sentiment of a poem. That there is scope in architecture not only for the exercise of imagination and feeling, by which genius may charm the eye and move the heart, but that it is capable of reflecting various shades of purpose, we need only look back upon the origin and history of the art to be assured.

The principle of expression was broadly recognised by the Greeks in their original institution of, and division of their system into, the different orders, and by the Romans and revivalists in their mixtures and modifications. The Greek orders are themselves so many different signs or characters of expression, as representatives of positive qualities, and along with the different proportions of intercolumniations and arcades and pediments as adjusted by them or their successors, the various dimensions of apertures according to the order, and the congruity of the parts of each order, the character and ornaments of which admirably correspond to that of its proportion and forms, and to no other, assert and prove how capable are the necessary and general forms of architecture of receiving in

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